Vaccine Storage and Handling

Quick Reference Guide

This is an adaptation of the CDC Vaccine Toolkit to be used only as a reference guide. Complete information on vaccine storage and handling can be found at:

http://www2a.cdc.gov/vaccines/ed/shtoolkit/

March 2011

Effect of Temperature on Vaccines

- Live vaccines tolerate freezing. They deteriorate rapidly after removal from freezer and exposure to light.
- Inactivated vaccines are damaged by exposure to freezing temperatures. They do tolerate short time period above acceptable temperature of 46* F.

Cold Chain

- Vaccines must be stored properly from the time they are manufactured until they are administered to your patients

Vaccine Storage and Handling Guidelines

- Develop and maintain detailed written protocol for staff to follow
- Assign vaccine handling responsibilities to one person
- Designate a back-up person
- Provide staff training on vaccine storage and handling. Use TIDE training Module E at website http://www2.edserv.musc.edu/tide/storage/index.lasso

Vaccine Storage Requirements

- Maintain required temperature range throughout the year
- Separate external doors are required for refrigerator and freezer
- Vaccine unit must be large enough to hold year's largest vaccine inventory
- Vaccine unit is dedicated to vaccines (some biologics, no food or beverages)

Prefilling Syringes

- Not recommended by CDC or State Immunization Program
- Increases the risk for administration errors
- Increases vaccine wastage
- May result in bacterial growth in vaccines that do not contain a preservative

Temperature Monitoring

- Check and record the temperatures twice a day
- Use temperature log for both refrigerator and freezer compartments
- Keep temperature logs for 1 year
- Take immediate action when the temperature is outside the recommended range
- Do NOT administer mishandled vaccine
- Separate thermometers for refrigerator and freezer units
- Use certified calibrated thermometer (biosafe liquid, continuous graphic, or min/max)
- Manually check temperatures twice a day even if using continuous graphic thermometer

Recommended Temperatures

Refrigerator	Freezer
35°- 46° F (2° -8°C)	5°F (-15°C) or colder
Optimum 40° F (5° C)	Optimum 0° F (-20° C)

Vaccine Inventory Control

- Conduct a monthly vaccine inventory
- Avoid stocking excessive vaccine supplies min 30-day / max 120-day supply
- Monitor expiration dates, contact state when 4 months away from expiration date
- Rotate stock
- Never use expired vaccine or diluent

Emergency Relocation of Vaccine Planning

- Develop an emergency vaccine retrieval and storage plan, keep current, have written plan available for all staff to see and present it at each routine VFC site assessment visit
- Plan includes identifying a back-up site with a generator in the event of equipment failure or power outage

Dorm Style Refrigerators

Effective 12/31/2009, per CDC, dorm style refrigerators can no longer be used to store VFC/state supplied vaccines.

Any questions, please contact:
Mark Francesconi @ 222-5988 or Sue Duggan-Ball @ 222-1580

A Dorm Style Refrigerator is classified as any size refrigerator where the freezer compartment resides within the refrigeration body.

CDC requirements mandate that the refrigeration and freezer compartments must each have a separate external door.

Certified Calibrated Thermometers

CERTIFICATE of CONFORMANCE & ACCURACY

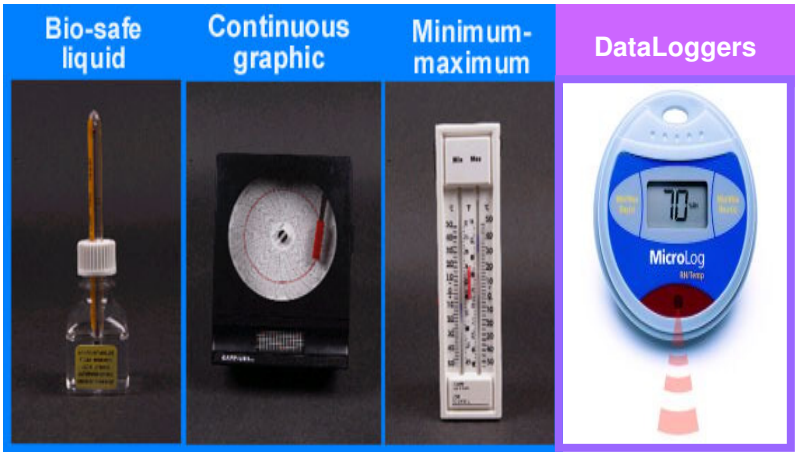
This thermometer identified by Serial No. 12508
was compared with a Standard calibrated at the National Institute of Standards and Technology (NIST), formerly the National Bureau of Standards (NBS); and was found to be within one scale division. The indications of this thermometer are traceable to N.I.S.T.

The standard Serial No. is 59001
The NIST Identification No. is 119016
TEST DATE APR 2 3 2003

QUALITY SINCE 1942

Clifton Thomas, Quality Control Supervisor
Ever-Ready Thermometer Co., Inc.
228 Lackawanna Avenue
West Paterson, NJ 07424
Phone 973/812-7474 Fax 973/812-7475

THE VALIDITY OF THIS CERTIFICATE & INSTRUMENT IS ONE YEAR



Preventive Measures

- Use a plug guard or safety-lock plug
- Post a warning sign above the plug and on the refrigerator
- Label fuses and circuit breakers
- Install a temperature alarm

Preventive Measures

- Remove vegetable bins and replace with bottles of water to stabilize refrigerator temperature
- Keep extra cold packs or blue ice in the freezer
- Never store vaccines in the door of the refrigerator or freezer

Storage of Non-Vaccine Products

Food and Beverages

Never store food or beverages inside the vaccine refrigerator or freezer. This practice results in frequent opening of the storage unit door and greater chance for temperature instability and excessive exposure to light. It may also result in spills and contamination inside the compartment.

Never store food or beverages inside the vaccine refrigerator or freezer.

Medications and Other Biological Products

If possible, other medications and other biologic products should not be stored inside the vaccine storage unit. If there is no other choice, these products must be stored below the vaccines on a different shelf. This prevents contamination of the vaccines should the other products spill, and reduces the likelihood of medication errors.